

IN THE CLAIMS:

1. (Currently amended): A method in a data processing system for loading a class, the method comprising:

- loading a class;
- inserting an immutability flag into the class;
- determining whether the class is immutable; [[and]]
- setting the immutability flag if the class is immutable[[.]]; receiving a request to invoke a server application;
- examining an argument in the request;
- if the argument is an object, identifying the class that describes the object;
- determining whether an immutability flag that is inserted into the class that describes the object is set, wherein the object is immutable if the immutability flag inserted into the class that describes the object is set;
- if the object is immutable, passing an argument to the server application that includes a reference to the object, the argument not including a copy of the object; and
- if the object is mutable, passing a copy of the object to the server application.

2. (Original): The method of claim 1, wherein the step of determining whether the class is immutable comprises:

- parsing the bytecode of the class.

3. (Original): The method of claim 2, wherein the step of determining whether the class is immutable further comprises:

- determining whether the class can be modified after it is created.

4. (Currently amended): The method of claim 3, wherein the step of determining whether the class can be modified comprises determining whether all properties of the class object are marked private.

5. (Original): The method of claim 3, wherein the step of determining whether the class can be modified comprises determining whether there are any non-private methods that update properties of the class.
6. (Canceled)
7. (Canceled)
8. (Currently amended): A method in a data processing system for invoking an object, the method comprising:
 - receiving from a caller, a request to invoke an object;
 - examining an argument in the request;
 - if the argument is an object, determining whether the object is immutable; [[and]]
 - if the object is immutable, passing an argument to the caller that includes a reference to the object and does not include a copy of the object; and
 - if the object is mutable, passing a copy of the object to the caller.
 - ~~rather than a clone of the object.~~
9. (Currently amended): The method of claim 8, wherein the step of determining whether the object is immutable comprises:
 - determining whether an immutability flag that is inserted into a class that describes [[for]] the object is set.
10. (Canceled)
11. (Currently amended): An apparatus for loading a class, comprising:
 - loading means for loading a class;
 - insertion means for inserting an immutability flag into the class;
 - first determination means for determining whether the class is immutable; [[and]]
 - setting means for setting the immutability flag if the class is immutable[[.]]:

a request to invoke a server application, the request including an argument, the request being an object;

a class that describes the object;

determining means for determining whether an immutability flag that is inserted into the class that describes the object is set, wherein the object is immutable if the immutability flag inserted into the class that describes the object is set;

if the object is immutable, an argument that is passed to the server application that includes a reference to the object and does not include a copy of the object; and

if the object is mutable, a copy of the object being passed to the server application.

12. (Original): The apparatus of claim 11, wherein the first determination means comprises: parsing means for parsing the bytecode of the class.

13. (Original): The apparatus of claim 12, wherein the first determination means further comprises:

second determination means for determining whether the class can be modified after it is created.

14. (Currently amended): The apparatus of claim 13, wherein the second determination means comprises means for determining whether all properties of the class object are marked private.

15. (Original): The apparatus of claim 13, wherein the second determination means comprises means for determining whether there are any non-private methods that update properties of the class.

16. (Canceled)

17. (Canceled)

18. (Currently amended): An apparatus for invoking an object, comprising:
receipt means for receiving from a caller, a request to invoke an object;
examination means for examining an argument in the request;
determination means for determining whether the object is immutable if the argument is an object; ~~[[and]]~~
reference means for passing an argument to the caller that includes a reference to the object and does not include a copy of the object; and
if the object is mutable, the reference means for passing a copy of the object to the caller,
~~rather than a clone of the object if the object is immutable.~~
19. (Currently amended): The apparatus of claim 18, wherein the determination means comprises:
means for determining whether an immutability flag that is inserted into a class that describes ~~[[for]]~~ the object is set.
20. (Canceled)
21. (Currently amended): A computer program product, in a computer readable medium, for loading a class, comprising:
instructions for loading a class;
instructions for inserting an immutability flag into the class;
instructions for determining whether the class is immutable; ~~[[and]]~~
instructions for setting the immutability flag if the class is immutable~~[[.]]~~;
instructions for receiving a request to invoke a server application;
instructions for examining an argument in the request;
if the argument is an object, instructions for identifying the class that describes the object;
instructions for determining whether an immutability flag that is inserted into the class that describes the object is set, wherein the object is immutable if the immutability flag inserted into the class that describes the object is set;
if the object is immutable, instructions for passing an argument to the server application that includes a reference to the object, the argument not including a copy of the object; and

if the object is mutable, instructions for passing a copy of the object to the server application.

22. (Currently amended): A computer program product, in a computer readable medium, for invoking an object, comprising:

instructions for receiving, from a caller, a request to invoke an object;

instructions for examining an argument in the request;

instructions for determining whether the object is immutable if the argument is an object;

and

instructions for passing an argument to the caller that includes a reference to the object and does not include a copy of the object ~~a rather than alone of the object~~; if the object is immutable[.]; and

instructions for, if the object is mutable, passing a copy of the object to the caller.